

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 03/02401

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01J31/12 H01J29/48 H01J3/02 H01J17/49

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 01 41176 A (MESA VISION) 7 June 2001 (2001-06-07) abstract; figure 4 ---	1-7
A	US 4 719 388 A (OESS FREDERICK G) 12 January 1988 (1988-01-12) abstract; figure 4 column 5, line 4-10 ---	1-7
A	US 5 982 086 A (VAN GORKOM GERARDUS G P ET AL) 9 November 1999 (1999-11-09) column 5, line 4 -column 6, line 4; figure 2A column 9, line 7-29 --- -/--	1-7



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

G document member of the same patent family

Date of the actual completion of the international search

18 September 2003

Date of mailing of the international search report

25/09/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Weisser, W

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 442 253 A (VAN GORKOM GERARDUS G P ET AL) 15 August 1995 (1995-08-15) column 6, line 23 -column 7, line 16; figures 2A,4,7,12 -----	1-7
A	US 5 378 963 A (IKEDA RIKIO) 3 January 1995 (1995-01-03) column 5-6; figure 6 -----	1-7
A	US 5 729 244 A (LOCKWOOD HARRY F) 17 March 1998 (1998-03-17) abstract; figures 2,3,7 -----	1-7

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 03/02401

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0141176	A	07-06-2001	AU 4707201 A WO 0141176 A2	12-06-2001 07-06-2001
US 4719388	A	12-01-1988	AT 62564 T CA 1265574 A1 CN 86105201 A ,B DE 3678649 D1 EP 0213839 A2 IN 165824 A1 JP 1988438 C JP 7021994 B JP 62090831 A KR 9510036 B1	15-04-1991 06-02-1990 18-02-1987 16-05-1991 11-03-1987 20-01-1990 08-11-1995 08-03-1995 25-04-1987 06-09-1995
US 5982086	A	09-11-1999	CN 1111924 A EP 0654172 A1 WO 9429893 A1 JP 8502142 T US 5959397 A	15-11-1995 24-05-1995 22-12-1994 05-03-1996 28-09-1999
US 5442253	A	15-08-1995	NL 8901391 A NL 9000060 A US 5313136 A US 5621271 A US 5903094 A AT 135492 T AU 647738 B2 AU 5616090 A BR 9002533 A CN 1048276 A ,B DE 69025800 D1 DE 69025800 T2 EP 0400750 A1 ES 2086361 T3 JP 3009706 B2 JP 3029246 A KR 238742 B1 SI 9011067 A RU 2095879 C1 US 5557296 A CN 1053320 A ,B DE 69026233 D1 DE 69026233 T2 EP 0436997 A1 ES 2086365 T3 JP 3068653 B2 JP 4212245 A NL 9001266 A US 5347199 A US 5986627 A US 5386175 A US 5625253 A US 5525873 A US 5701134 A US 6188178 B1 US 5721468 A US 5637954 A US 5966109 A	02-01-1991 02-01-1991 17-05-1994 15-04-1997 11-05-1999 15-03-1996 31-03-1994 06-12-1990 13-08-1991 02-01-1991 18-04-1996 19-09-1996 05-12-1990 01-07-1996 14-02-2000 07-02-1991 15-01-2000 30-04-1996 10-11-1997 17-09-1996 24-07-1991 02-05-1996 10-10-1996 17-07-1991 01-07-1996 24-07-2000 03-08-1992 01-08-1991 13-09-1994 16-11-1999 31-01-1995 29-04-1997 11-06-1996 23-12-1997 13-02-2001 24-02-1998 10-06-1997 12-10-1999

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 03/02401

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5442253	A		US 5489815 A	06-02-1996
US 5378963	A	03-01-1995	JP 4280047 A	06-10-1992
			JP 4280048 A	06-10-1992
			JP 4282540 A	07-10-1992
			US 5473219 A	05-12-1995
			DE 4207003 A1	10-09-1992
			GB 2254486 A ,B	07-10-1992
			GB 2259183 A ,B	03-03-1993
			GB 2259184 A ,B	03-03-1993
US 5729244	A	17-03-1998	WO 9948121 A1	23-09-1999
			US 6522061 B1	18-02-2003